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ABSTRACT

This preliminary study was conducted to examine indigenous classroom innovation, defined as any instructional, curricular, or other change a teacher reported making in the current year or in recent years. Such innovations were described in interviews with 11 teachers in three diverse schools settings, who either created the innovations or introduced them into their classrooms. Sixty-one innovations were described and have been categorized as follows: (1) instructional (a new way of presenting or activating curricular content); (2) curricular (emphasizes some new substantive skill or content); (3) governance (new classroom or group management techniques); (4) relational (change to affect socio-emotional or work relations); (5) motivational, emotional, attentional (any new activity designed to energize learning); and (6) imposed (new curricular, instructional, or other approach that has come down from above by policy). Sources of innovative ideas, their educational impact, effective innovations, and dimensions of the qualities of innovation are presented. Narrative descriptions of innovations from five teachers considered particularly effective are included. (LL)

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# TEACHERS' INNOVATIONS: A PRELIMINARY LOOK AT SOURCES, KINDS, AND GROSS EFFECTIVENESS OF INDIGENOUS CLASSROOM INNOVATIONS

by

Frederick F. Lighthall

Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, April 20-24, 1992).

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# Teachers' Innovations: A Preliminary Look at Sources, Kinds, and Gross Effectiveness of Indigenous Classroom Innovation

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In this paper I focus on a surprisingly unexamined question: "Is there any such thing as indigenous classroom innovation, and if so, what do such innovations look like?" The question is posed against the context of a widespread assumption that the only effective means of changing the content or process of classroom instruction in the nation's schools is sweeping programmatic change at the district, state, or national level. This context of indigenous change is captured in metaphors regarding widespread practices of educational innovation and of research on educational innovation: the metaphors of outside-inside and of top down. This paper focuses on the view of educational innovation from the inside and from the bottom -- innovation, that is, at the specific site, the classroom, where any educational improvement must reach if an effect on students' learning is to be observed.

## Introduction

Improving schools by implementing innovations from outside schools does not touch many schools. Outside-in improvement attempts also struggle against great obstacles to work well in the relatively small number of schools they do touch. School improvement efforts have taken three major paths. Societal changes bring about sweeping new constraints for schools, as in the U. S. Supreme Court's rulings and subsequent legal enforcement of school desegregation, or as in Canada's "inclusion" moves toward bi-lingual education. This kind of school change is quite rare and touches only a circumscribed aspect of schooling, albeit throughout a society. A second kind is more local, and is usually referred to as "school reform." It typically focuses on restructuring power in a large city's school system or changing a state's educational requirements, geared to reorganizing the governance of education -- e.g., granting parents and community more influence over curriculum decisions, allocating discretionary funds, and even approving or rejecting school administrators. School reforms may leave lasting structural

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changes -- like requirements of minimal competence and programs of testing in a number of states in the U. S. But these changes at state or city levels often (typically?) undergo dilution after their initial forms, reverting to earlier kinds and levels of practice. A third path to school improvement is less political and still more local than the second. It focuses on specific programmatic changes in self- or criterial-selected schools within school systems -- e.g., introduction of a new system of reading instruction, a new social studies curriculum, or a more individualized mode of instruction. These efforts are described in terms like "innovation diffusion" and "implementation."

All three forms of school improvement originate outside of and remote from the school practices and effects they are intended to change. Projects of "innovation implementation" have uniformly proceeded from outside schools: Planners in legislatures or bureaus of education or universities have found this instructional weakness or that curricular gap, have collaborated with experts to plan corrective programs, and have set about implementing them in "target" schools. Political and educational "reforms" have aimed at more thoroughgoing restructuring of school governance, have been fewer in number, and have mostly failed to influence much that happens in classrooms. We have learned that we can have new patterns of political participation without changing curriculum or instructional effectiveness very much. The society-wide changes are circumscribed and are also subject to resistance and subversion at regional and local levels.

**Programmatic Innovation**

Far more frequent, and more carefully studied, have been the programmatic innovations aimed at specific educational practices: The programs, projects, and procedures of planned change. Intensive and extensive studies have been carried out on larger or smaller samples of these innovation attempts. Lessons learned from these studies are summarized by Huberman and Miles' Innovation Up Close (1984) and in a recent paper by Milbrey McLaughlin (1990). The main thrust of these lessons is captured by McLaughlin:

> ... the nature, amount, and pace of change at the local level was a product of local factors that were largely beyond the control of higher-level policymakers...

> Implementation dominates outcome [emphasis original] ... local choices about how (or whether) to put a policy into practice have more significance for policy outcomes than do such policy features as technology, program design, funding levels, or governmental requirements. Change continues to be a problem of the smallest unit... What matters most to policy outcomes are local capacity and will [emphasis added]. -- p. 12

McLaughlin concludes from her review of her own and other earlier research on school improvement that instead of aiming to change practice, improvements ought to be aimed at enabling practice, and that instead of focusing on specific practices they ought to take the longer range view of "enabling practice within the presence of existing constraints" (p. 15). She makes the distinction between acute and chronic ills:

> ... the problems addressed by current state-driven reforms or change agent programs are not acute; they are chronic. Reform needs to be systemic and on-going; special projects frame the problems of reform artificially and superficially and so are limited in their ability to significantly change educational practices. (p. 15).

Specific "enablers" that McLaughlin singles out, drawing on Fullan, Bennett, & Rolheiser-Bennett (1989), are "institutional structures" that (1) "provide regular feedback about teachers' performance," (2) give teachers a voice in curriculum decision making, and (3) "promote collegial interaction" (p. 15).

Yet each of these "enablers" is voiced as a "systemic" change that is to be brought about from outside the schools, in the same "top-down" manner as the earlier efforts. Surely the "systems" that need changing, in McLaughlin's view, have themselves evolved in their current form in response to "micro-level" realities. McLaughlin omits mention of how her own macro-level perspective can come to operate as a micro-level reality in the minds and motives of local school administrators and teachers.

**Indigenous Classroom Innovation**

The present study was just a first foray, a pilot study. It examined a source of classroom-level innovation to date virtually ignored in the literature of school improvement, planned educational change, or school reform, namely, indigenous educational improvement by teachers in their own classroom instruction and curricular offerings. A sample of classroom innovations was sought, if such could be found, each of which grew out of a teacher's response to an opportunity or problem felt by the teacher in his or her local situation. These innovations would be not only teacher-initiated solutions to problems or opportunities felt by the teacher, but also would necessarily be responsive to the particular conditions, resources, school policies, and students facing the teacher. In short, the innovations sought would be polar opposites of those characteristic of top-down, outside-in programs of school improvement on a number of dimensions: relevance to the teacher's goals; fit with teacher's learning capacity and his or her over-all curriculum; students' level of learning; instructional and curricular resources; and building policies and support. Examining each such innovation would give us one particular view of the process of originating and modifying such innovations. Widely divergent settings were sought to incorporate as many opportunities for finding innovations as possible and, among those found, as many kinds and constraints as possible.

**Method**

An "innovation," for the purposes of this study, was defined as any instructional, curricular, or other change a teacher reported making in the current year or in recent years. It need not be new to the world, to that school system, or even to that teacher's school, but it had

PUT TABLE 1 ABOUT HERE

to be new to that teacher, a change in his or her mode of teaching in some way. Nor need these innovations be the original creations of the teacher introducing them. They might, indeed, be the teacher's own creation, but they might also be begged, borrowed, or stolen. This definition allowed the widest possible latitude of inclusion so that great initial variance could

**Table 1**

**Distribution of Teachers by Schools, Grade, and Subject**

| Moray | | Martinez | | Washington | |
|---|---|---|---|---|---|
| Teacher | Grade \ Subject | Teacher | Grade \ Subject | Teacher | Grade \ Subject |
| EG | Kindergarten | CS | 1 | TT | 1 |
| EN | 9-12: Shakespeare | NNY* | 5: Math/Sci/Art | LT | 1 |
| FC | 10-12: Amer. Hist. | ON* | 5: Soc. St./Lan.Arts | CX | Kindergarten |
| | | DJ | 6-8: Soc. St. | MK | 1-2: Spec. Ed. |

* - Teaching as a team in the same room, 47 students.

then be set as a problem to explain.

Such innovations were described by 11 teachers who either created the innovations or introduced them into their classrooms. Table 1 provides the distribution of teachers by school, grade level, and subject matter. The cells of Table 1 reflect the degree of diversity among settings and teachers that I sought, conditioned by the willingness of teachers to be interviewed (I indicated 45 minutes to an hour; some teachers expended the interview to more, up to two hours). The schools differ greatly. The Moray School is a private, racially integrated school, from nursery school through grade 12, is associated with a university, and supports great teacher autonomy and innovativeness. The Martinez School is a k-8 public elementary school in Chicago with predominantly Latino students and a reputation for an orderly, partly traditional and partly innovative staff. Martinez has very little student turn-over as a matter of school policy: with few exceptions, students may enroll only at the kindergarten level. The Washington School is a small school (10 teachers), from Pre-school to grade 4, in one of the most poverty stricken towns in Illinois. Its population is virtually all working class, African-American. The town has neither a gas station nor a MacDonald's and teachers estimate that at least half of students' homes have no telephone.

I interviewed all teachers personally, mostly in their classrooms, approaching them directly in the Moray School and through their principals in the public schools. I indicated I was studying what they might be doing that was new for them this year, and handed them a three-page list of the kinds of questions I might want to ask them. Each interview was tape recorded with promised anonymity, then transcribed. Innovation descriptions were then examined for dimensions of analysis. This produced three major dimensions: (1) type, of which six were identified; (2) source, of which five seemed sufficient; and (3) educational impact, judged positive and fundamental, positive and peripheral, with no impact, or with negative impact, with per cent of the class's students affected. I also obtained testimony of who the prime sources of professional support were for the public school teachers. The central question I asked was some variant of "What are you doing this year that is new for you?" No teacher

had any trouble understanding what I was driving at, and most began immediately with some specific description of materials and procedures. If not already indicated by them, I probed for the number of children affected, the students' responses to the innovation, the source of the teacher's idea of the innovation, the problem that the innovation seemed to solve or alleviate, whose support for the innovation was needed, and then asked to see, if not already shown, examples of the students' work in relation to the innovation. Photographs supplemented the taped interview.

## Results

### Types of Innovations

The 11 teachers described 61 innovations in specific terms, either pointing at the evidence in their rooms or describing their procedures, timing, and student responses with sufficient detail to be persuasive as to the innovation's introduction. While I categorized all innovations according to a single dominant type, each one, of course, also entailed aspects of other types. [1] To communicate the types of innovation effectively, I shall provide, first, my own brief description of the abstract type, second, brief descriptions of examples, and finally, direct quotation of a teacher's own description of one exemplar. Six types seemed to account fairly well for all 61 innovations.

1. Instructional. Any description of a new way curricular content was presented or activated or the timing or pacing of curricular exposure. Almost every instructional innovation entails some curricular change, too, but if the emphasis is on a new way to get writing or science or history presented or studied, or changed timing of content presentation, I call it instructional. Example: CS decides to introduce both her spelling and her whole-language writing much earlier in the year; LT provides a cut-out book in which her first graders can trace the letters of their sentences which, when finished, constitute a storybook.

***TT, 1st grade, Washington School: "Unit" and "Whole Language" Instruction.***

> **FFL: What are you doing this year that you planned to do, like over the summer or from last year?**
> **TT: Well, I wanted to do a lot of whole language, I wanted to get into thematic units, and I didn't think I would have the energy to do that, but**

so far we're on our second unit, we did spiders first and now we're doing rodents, and I really like that.
FFL: Tell me a little about that kind of unit. What's the distinctive feature of that?
TT: Well, that it's whole language. We write stories with mice as the subjects. Well, let me tell you what I did before. Before we had 15 minute segment, whatever, time slot per day of I call it SSW, sustained silent writing. And I was getting, with the kids were new to words, they had probably ten words that they really knew and I wasn't getting much from them, until we did the spider unit. And then we had a pet spider in the room. And we sat down, we wrote stories, and we did modelling, we did LEA stories to model how to write a story about Charlotte, which was the name of the spider, and that went along with the novel we were reading, we were reading Charlotte's Web. Which I never thought I'd do a novel with first graders. But it's working out real well. We're on our second novel now. So anyhow, once I had modeled how to write the story and had them dictate the story to me. We sat down at our silent writing period, and I'm writing too, so they don't come up to me, "How do you spell this? How do you spell that?" It's silent, you do it yourself, and you spell it however you spell it. Try your best to sound it out, but you know what you get from a first grader.
FFL: Sure. But now, can you.. when they write it, can you decode it?
TT: Yeah.
FFL: You can.
TT: They use -- I give them words that go along with the unit and I put them on little cards. So they can use those, they can use the words they know, and they just go from there, with some made-up words... It's basically whatever they want to write about. And they usually draw me a little picture and what I'm getting now is a story that will have two sentences, three sentences, that's on a topic. Before it was, well, William would write, "I like girls, I like boys." But it wasn't really a story. Slightly connected but not a story.
FFL: So now you get some connection.
TT: Right, right. And I think that changed their thinking about all the spelling words we've been doing. Now the spelling words have purpose. That it was more than just getting an A on Friday so that Mom was happy about it. I really think they see a connection. ... And of course, I put them in the newsletter, and they got their recognition, they were really excited about that.
FFL: So now, where'd you get this idea? Now this idea is the unit, right, the story unit, as I understand.
TT: Well, you take a topic like spiders and in science you study the parts of the spider, in math you count the legs of the spider. Which one is the spider, which one is the insect? Eight versus six legs. Right now we're doing rodents. We're studying the classroom guinea pig. And why they have a block of wood in there and how their teeth never stop growing. That's the science portion. But then with the language portion you write stories about the guinea pigs. You introduce words about the guinea pigs. You write sentences.
FFL: So that idea of having a topic that you come at from the various subject matter.. various points of view, you didn't do that before.
TT: No, no. It takes planning. ... I guess what it takes is research. You have to learn about the rodents, learn about the spiders. I knew nothing about spiders, and now I definitely do. But I wouldn't go back from using a thematic approach. And all the better districts do.

**FFL: So where'd you get the idea?**
**TT: Um, a long time ago I interviewed, and the woman was looking for someone who knew the thematic approach. And I lost that job simply because I didn't. And it was something that I had really wanted, to get into that district.**

2. Curricular. Any description that emphasizes some new substantive skill or content to be presented or new manipulables to be handled, where the emphasis is on experience with new contents of experience. Examples: LT's number line for the number of days the children have been in school; CX's inclusion of food preparation for the "latch key" kids of Washington School; CX's sand table on wheels.

***MK, combination grade 1 and 2 learning disabled, special education class (9 children), "team teaching" with Mrs. H (across hall, 7 children): Food preparation.***

**MK: ... We saw that the children needed some assistance, for many of our children were, I guess you call them latchkey children. Their parents were not home, would not come home until nine o'clock at night. They were home alone with other children and weren't caring for themselves. Some were not eating, some were not washing themselves, so I started to think about what these children could do to take care of themselves, and one of the projects was to make a sandwich, how to cut a sandwich, how to sit at a table and use silverware. And then it evolved where Mrs. H and I decided we will try an exchange, I would take her kids, I would invite them in, and basically, it was cold preparation, how to mix up lemonade, how to spread jelly, how to set a table, and now we've gotten into some other things, cooking soup, and we got into science, we talked about steam, we talked about differences, how things change, you know, when you mix mixtures and different concoctions. Oh we also gave awards at midterm, just about now, at the end of the quarter. We gave their cooking awards, which were wooden spoons tied with bows and their names, and if they had made so many kinds of things and participated well, we gave them their wooden spoon awards.**
**FFL: So that was new this year?**
**MK: Yes, that was new.**

3. Governance. Any description of new classroom or group management. Examples: LT's assigning a number to every child to identify his or her possessions, papers, box for cumulative work, and for line management; EG's eliciting of classroom rules of conduct from her kindergartners.

***LT, grade 1, Washington School: Student ID numbers and line monitoring***

**LT: ... I'm glad I was able to get it the very first day. Well they had pencils, and these type of students, their way of life is a little different, if**

**they don't have something, they take it from others, and that's in all. A boy would come in with two pencils, and I'd say, how that happen? Well, they're taking each others pencils or their supplies, and I thought, "This is ridiculous." This is what I don't like, that little management stuff. ... To me, organization is a big plus. I said okay, that's it. I brought nail polish from home. Every time a student got a new pencil, I put their number on their pencil, and this has solved the theft problem... I started out with masking tape and I found that came off in some day, and I had to think of something, something's got to be done. So I put the nail polish on there.**
**FFL: It's removed it as a problem for you to deal with.**
**LT: Right. And it just gives me more time on task with teaching.**
**...**
**FFL:... TT doesn't do that?**
**LT: She does now..**
**FFL: She got it from you.**
**...**
**LT: I always have a line leader, every week.**
**FFL: Well, you can change that, in fact you can rotate it systematically, that way and keep track.**
**LT: I do, that's why it's no problem for me, it's no management problem for me, because those numbers, you know, right now number 17, and then number 18 will be next week. ... You know, and there's no fights, "When is my turn?" Because they know. I have a little girl that's number 20, never heard a peep, "I'm in the back of the line." Never heard anything from...the girls, they boys were in there first, and then the girls, never heard anything...**
**FFL: You gave all the boys first, early numbers, and all the girls later numbers. Why did you that?**
**LT: Because I knew I would probably have to keep a closer eye on the boys and have them in my view. So they were going to be in the front of the line.**
**FFL: Okay. I see, you are in the front of the line, you don't go to the back of the line.**
**LT: No, I've changed now, now I have, I didn't do this before, but I have the line leader, the line leader now, when we go to the bathroom or go to lunch, the line leader takes the clipboard and is able to monitor the students. If they are talking she'll put that number down. And this way, I'm more mobile.**
**FFL: All these kids memorize their numbers?**
**LT: Oh yeah.**
**FFL: And not only their own but each other's?**
**LT: Oh yeah, they're the monitors, they're there with the clipboards putting numbers for each.**

4. Relational. Any description of a change to affect socio-emotional or work relations between teacher and students, among students or teachers, or among students, teachers, and parents. Example: EG's introduction of a "lottery" to determine who sits at what table on Tuesdays and Thursdays, to break up the control that tight cliques exerted over who had informal contact with whom during lunch and leisure activities; MK's shift in communication

with parents from notices of misbehavior, leading to parental punishment, to elimination of almost all bad-conduct notices and frequent notices of children's good behavior, via newsletter and notes.

***Olive Norris, grade 5 co-teacher (of 47 students, with NNY) at Martinez School: <u>Co-teaching for the first time</u>.***

**FFL: How did that team teaching, teaming come about? Do you have any idea?**
**ON: We talked about it only because a couple of teachers who had done it the previous year thought, Boy! is this nice, it really alleviates some of the pressure, some of the stress of teaching. So I think just in joking, the two of us, we were next door to each other.**
**FFL: You two worked it out yourselves. Is that it? Or did the administration come to you and say, "Hey, why don't you do.."**
**ON: No, but what was ironic is, after we approached the principal and asked her, the only way I would do it is if we would go to fifth or higher grades. I like the upper grades. And um, she said she was going to approach the two of us to see if we would be interested in something like that. So it really worked out. She already had it in mind -- and with the two of us together.**
**FFL: So you were really all in sync.**
**ON: They usually only do the team teaching.. See they usually only do the team teaching--there's a certain term for it, in the ESEA funded, those are the children that are very low in their reading scores, it's a federally funded, or state funded...**
**FFL: To help, compensatory education.**
**ON: Exactly.**
**FFL: But this is not compensatory.**
**ON: No. Not that we don't have children in there that could go on that thing.**
**FFL: What for you was the biggest change from last year?**
**ON: The biggest change. Not having total freedom. Having to stop because I know it's somebody else's turn. Or, if I'm giving a direction, I'm not saying I, I'm trying to say we...Just to realize she's there, not that it's hard to go along with, just to have a consciousness of it in my speaking to the students, and by always including her...**
**FFL: A whole new mind set.**
**ON: A whole new mind set. Exactly. I tell you the first--the last day of school. All the children go to their new classroom for the last half hour of the day. Well we walked in, and they walked in, and there was noise, and she was shouting out attendance, and I was talking and she started talking, I was "Oh my God, what did I do? Is this the way it's going to be?" And it really stayed with me all summer.**
**FFL: Did you guys get to plan together over the summer?**
**ON: No. We did not.**
**FFL: You came in bang, on the first day?**
**ON: We had meetings in the first days, there were no students. We got together. The only planning is, what subjects do you like? What subjects to teach, what would you like to do? And then we worked it out. And then if time-wise something didn't work out, we change it,...**

FFL: So you're...as I understand it she does the math and the science and the health, and you do English and social studies?
ON: Exactly. And the language arts. And it's been frustrating with no books. Or changing books if we had old books and never got new books that were supposed to be on the last shipment, you know, we don't have a lot of the things that we need. Um, so I--it's changing, I started out with spellers, and then when we had separate groups, I would teach spelling to this group, and then they'd have to switch when I was teaching spelling to the next group, they'd have to exchange you know, this group, you know, a lot of time wasted, I went home very frustrated, I'm still not totally comfortable. I think it is, it could be very beneficial. I enjoy the challenge of team teaching. I guess it's just hard to wait to get organized. To wait to get through all this stuff. The reading groups--I taught half, and her half was two separate groups. So she said, "Okay, for half an hour, you take your oral work, and then I'll do quiet work with my class." Well, 47--how quiet can it be, the teachers still have to help the students, the students still raising their hands and saying help me. I did my oral work, and then I laughed, because I'd ask questions, and her kids would answer. And were sitting here, now wait a minute. Maybe you should come here, and the kids who aren't listening should go on that side of the room. That's the point it got to. I mean it's--I looked for things to keep it going, believe me, and then kids listening, and I'd try to do quiet work and say let's have some independent reading, and I would look at them, and they're looking around, and I would say, "Is it hard for you, when they're talking, and she's teaching?" Yes. I said, "Put your hands over your ears." ...

There's so many kids that don't belong in our room, that they need special help. They have one point something, two point something reading scores. Then I think it out--are the kids that aren't going to do it -- they're not going to do fifth grade, they won't do third grade level, I mean I don't want to think that way, cause it's a defeatist attitude. But we need some organization. ...
FFL: Well right now your reading.. you're in one whole classroom group with 47 kids.
ON: Right. Right.
FFL: How does that go?
ON: Better than with all the groups. I--there's a control there.
FFL: Help me--let's see, this is a half-hour lesson a day, or is there more?
ON: Reading is from 9:50 until 11:11. An hour and twenty minutes...
FFL: Are they reading out loud?
ON: Yes.
FFL: How does that go?
ON: Um, well, NNY and I just talked about it. When we come back, I'm not a game person, I'm used to junior high teaching, all right, maybe, she's good at that, she has more of that in her, that type of teaching, I'm more directive and oral, and I like discussion and all that, so at 10:30 now, we get our ten minute break, if someone comes in. So that's working out. I did my oral work with the kids. We'd leave for ten minutes. And at ten thirty, I'd start their independent reading.
FFL: What's this ten minute break? I don't understand.
ON: Just a break. See we don't have lunch. We're a closed campus. We do not have lunch with our students. But the teachers do get twenty minutes a day. Ten minutes in the morning...There is no lunch break. And we get out at ____. Because of the area.
FFL: I see. So then you come back after that. To do more reading.

**ON: At ten till eleven, and there's still 20 minutes of reading. So we decided now that she could do something. Yesterday she spent it reviewing the vocabulary playing like fill in the blank games with them to prepare them for the test tomorrow.**
**FFL: So all of this you hope will--at any time do your kids get to read out loud?**
**ON: Yes. We call on them to read out loud. Exactly.**
**FFL: As you would in a small group.**
**ON: Yes. And you know what? All these new things that I'm finding out, I mean I'm really torn, I mean, I'm coming into the situation, and I'm like, OK, get some organization, because the kids need it, especially where we are at, they need the stability of knowing they do this and then they do that and then they do that. And then all the things I'm finding out teachers are doing when I go to my night class, is groups, and you need, and the things that I'm reading, you need noise, you need confusion, the kids need to move around and get in their own groups, and the teacher's only the moderator. She's not the instructor. And that bothers me. I don't know. I'm trying to get at least organized...**

5. Motivational, Emotional, Attentional. A description of any new activity designed to energize learning or to neutralize upsetting emotions or increase attention. Examples: TT's introduction of end-of-day hugs for every child as they leave the school; LT's positioning of a particular form of activity at the very outset of the day, before the "opening" exercises of pledge of allegiance in order to settle the students into a "schoolwork" orientation.

***TT, 1st grade at Washington School: End of day hugs.***

**FFL: Well, what are you doing.. what else are you doing?**
**TT: Well, I started something this year that stemmed from something that happened last year. Last year with my P.M. kindergarten, I had real warm feeling in the room. With my A.M. kindergarten, I was doing the same activities, but there wasn't the same feeling of cohesiveness with the kids. It was, I was the teacher and they were the kids. But for some reason, the P.M. kindergarten, it was more of a huggy atmosphere. Maybe they needed it more than the morning kids. I don't know how it happened. But I noticed what the end result was.**
**FFL: Which was what? The end result was?**
**TT: Just the feeling I have in this room. That I have more kids, there's a real respect, because we work together, and we really care about each other, and that's communicated at every level. When they come in they know it, and when they leave they know it. And how I do that is--they thought I was crazy at first...**
**FFL: You're now talking about this year in this school.**
**TT: In this group, right. Before I send them home every day, each child gets a hug. And it just creates an atmosphere where learning can occur. Even though it's done at the end of the day. They come back knowing that their teacher cares about them. That even though she may tell them to sit down and straighten up in that chair, and pull it under the desk, and line up in that line, but they know I care. And so I think they try a little bit harder.**
**FFL: Now you learned that from last year.**

**TT: Because the kids were five and they needed it, and they came to me for it. And I really didn't have time for it, because I wanted to get this done, and that done, and this done, but because the kindergartners, they were demanding it, and then what I noticed, the P.M. demanded it, and the A.M. didn't. And I realized where I got with the P.M., and I didn't with the A.M. I thought, there's something to it. The parents, when they first saw it, thought I was nuts. They would sometimes come in and pick up kids, and they would notice this line of kids, all the other kids are kids are leaving the building. But there's this line of kids waiting to hug Mrs. T. And they're like, "What is she doing?" But it just gets me the results I want, in a cheap fashion, to tell you the truth.**

**...**

**FFL: I'm interested now.. last year the kids came to you, they seemed needy, so you hugged them. Wasn't quite what you were up to, but then when was it that you began to think, "Gee, maybe I should initiate?"**
**TT: Over the summer. I thought back over what had happened. And I didn't have as well behaved of a group in the A.M. as in the P.M....**
**FFL: Did you ever try in the A.M. what the P.M. kids were needing?**
**TT: They didn't really relate to it too well. Yeah, I tried it a little. I don't know, maybe it was me.**
**FFL: You of course tried it after things had got started, and then, kind of norms, are set. "What is this?" But here you had it from the word go.**
**TT: Yeah, the first day.**
**FFL: So tell me about the first day? How did you work it?**
**TT: Oh, they thought I was nuts. So I told them...**
**FFL: This was entirely new to them of course.**
**TT: Oh, definitely. Some of the kids now give me the biggest hugs, and you just know that maybe it's the only one they get, you know, it makes you kind of sad, but some of the kids weren't able to do it at first. So it was a touch on the shoulders. And now it's real warmth, it's, "I don't want to go home, I like you, and you like me. You think I'm a good person and you think I try." And it's really, I mean it sounds real sad.**
**FFL: It's poignant.**
**TT: It's working. It's really working! Some of the teachers watch, and they probably think I'm crazy. But if they only knew what it created in the classroom.**

6. Imposed. Any description of new curricular, instructional, or other approach that has come down from above by policy that the teacher has accepted or acquiesced in or has adopted fully as his or her own. Examples: The "Build a Better Environment" program introduced in all grades of the Martinez School; the "developmental" approach for all kindergartens in the Washington school district that replaced the "academic" approach, thus banning the "ABC's" in kindergartens. Inclusion of this category is, strictly speaking, anomalous in a study of "indigenous" innovation. I included it because instances of top-down innovation were spontaneously mentioned by teachers, responsive to my question, "What are you doing that is new this year?" It is also useful to include as a simple contrast to indigenous innovations.

*NNY, fifth-grade co-teacher (with ON, 47 children) at Washington School:*

*"We Build a Better Environment".*

**NNY: I've taught fourth grade for the last four years. I had a fourth-fifth combination last year but we kept it on the fourth grade level. ...**
**FFL: But then this is the first time team teaching.**
**NNY: Yes. And the first time with recycle--"We Build a Better Environment" from this New York--what is it, the College of Human Services or something in New York City, they've got a grant from __Corp, and so they pick four schools throughout the country and we are one of the ones who wanted it. So they are trying to re-educate us on how were supposed--I don't know, they just want us to use this one--what is it--every class grade has a purpose to work at, and we try to relate that to everything that we teach. ....**

**I went to a wonderful course this summer, at the Golden Apple Foundation at IIT... It was just a wonderful workshop for three weeks. From 8:30 in the morning until 4:30 in the afternoon the time went by so quickly.**
**FFL: And what was that about?**
**NNY: Hands-on teaching in science, which I've tried to incorporate this year. It's very difficult with this huge group though, at this point, you know.**
**FFL: Have you been able to do anything?**
**NNY: I'm trying. I'm trying to--well, first of all, I had the whole, my whole year written up, and then they came up with the College of Community Services, how to fit that into everything, so I'm kind of redoing it.**
**FFL: I see. So you had a plan...**
**NNY: I had a plan...**
**FFL: ...for putting into practice what you were doing...**
**NNY: ...this summer...**
**FFL: ...and you've had to kind of push that back for this.**
**NNY: Yeah.**
**FFL: What's this about?**
**NNY: Well, basically I think the, I think overall they want you to devote--they don't use the term, but to explain about the holistic world and whatever, and we can hold every subject that way. Actually though, we've kind of zeroed in on recycling.**
**FFL: Did you get lots of materials to use?**
**NNY: No, we were supposed to get all the things ourselves. It's helped the kids recycling, we keep track of how they recycle. We want to go visit like a recycling place, and see if they...I was thinking I might put the hands-on science if I could just see with them how much our environment is affected by the a lot of the pollution and such.**

**I think within the next few weeks I want to start working on getting the ideas for the science fair we're going to start working on in January and start planning that with the children. And that's where I want to do a lot of the hands on stuff. That fits with then. Well I know I have to have one we build on the environment because that's our purpose. And she, she's been here twice the lady from New York, I think so.**
**FFL: You have somebody come in.**
**NNY: She comes to see how we're doing with it.**
**FFL: Did she give any in-service?**
**NNY: We had in service for three days in the summer.**

**FFL: I see. How was that?**
**NNY: (Laughs.) That wasn't like the hands on thing. I was spoiled by having such dynamic people in other one.**
**FFL: Well that the hands-on thing was useful for you. This one was not so.**
**NNY: No, not yet. I mean, we'll do it. But I want to figure out how I can blend it in with the other.**

Nellie Young's (NNY's) discourse about the environmental program from "New York City" captures qualities of commitment and motivation, or "purpose," strikingly different from those associated with her own and others' voluntary innovations; her description captures also the degree of support typically provided by agencies who initiate and try to implement programs of change from the outside in. It also illustrates how an imposed innovation can disrupt plans to implement an indigenous innovation whose preparation and energetic commitment by the teacher was much stronger.

Table 2 summarizes for each school the frequencies of each type of innovation for each teacher. Surprisingly, perhaps, teachers from the most impoverished school, Washington, turn up in this sample as the most innovative. Even without the striking innovativeness of Loraine Tims, [2] the Washington teachers are more innovative (in sheer numbers) than the teachers of Moray, the most privileged and innovation supporting school. Least innovating are the teachers in the sample from the large city school, Martinez. But immediately be cautioned: This sample is not in any sense representative of any of the three schools. It seems likely, however, that the bias that exists in this sample, for each school, is one in which the most innovative teachers are likely to show up in the sample.

Sources of Innovative Ideas

Table 3 distributes the innovations across the five sources evident from the teachers' testimony. If the teacher created the change him- or herself, or adopted it from reading or observations of others, the source was categorized as "self." A distinction was made between these self-initiated innovations as to whether they had been planned before the year began or

**Table 2**

**Types of Classroom Innovation By Teachers Within Schools**

| Schools | Instr. | Curr. | Gov. | Rela. | Mot.-Attn. | Imp. | Totals |
|---|---|---|---|---|---|---|---|
| **Moray** | | | | | | | |
| EG | 2 | 2 | 2 | 1 | | | 7 |
| EN | 3 | | | 1 | | | 4 |
| FC | 1 | 2 | | | | | 3 |
| Total | | | | | | | 14 |
| **Martinez** | | | | | | | |
| CS | 2 | | | | | | 2 |
| NNY | | 1 | | 1 | | 1* | 3 |
| ON | 1 | | | 1 | | 1* | 3 |
| DJ | 1 | | | | | 1* | 2 |
| Total | | | | | | | 10 |
| **Washington** | | | | | | | |
| TT | 2 | 2 | | | 1 | 2 | 7 |
| LT | 6 | 4 | 4 | | 2 | | 16 |
| CX | 2 | 2 | 1 | | | | 5 |
| MK | 3 | 3 | 1 | 1 | | 1 | 9 |
| Total | | | | | | | 37 |
| **Totals** | **23** | **16** | **8** | **5** | **3** | **6** | **61** |
| **Per Cent** | **38** | **26** | **13** | **8** | **5** | **10** | **100** |

* These three represent three versions of the same "school-wide," top-down program.

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**Table 3**

**Sources of Teachers' Ideas for 61 Classroom Innovations By Teacher Within School**

| | Sources | | | | |
|---|---|---|---|---|---|
| | **Self: Planned** | **Self: Response** | **Colleague** | **Volunteer Workshop or Program** | **Imposed** |
| **Moray** | | | | | |
| EG | 3 | 3 | 1 | | |
| EN | | | | 4 | |
| FC | 3 | | | | |
| **Martinez** | | | | | |
| CS | 2 | | | | |
| ON | 1 | 1 | | | 1* |
| NNY | 1 | | | 1 | 1* |
| DJ | | | | 1 | 1* |
| **Washington** | | | | | |
| TT | 3 | | 1 | 1 | 2 |
| LT | 13 | | 3 | | |
| CX | 2 | | | 3 | |
| MK | 5 | | 2 | 1 | 1 |
| **Totals** | **33** | **4** | **7** | **11** | **6** |
| **Per cent** | **54** | **6.5** | **11** | **18** | **10** |

* These three represent different aspects of the same program regarding a "clean environment."

whether they arose in response to conditions or qualities of the classroom group emerging after the year began. Ideas were classified as originating with colleagues if the teacher identified the idea as coming from another teacher, an administrator, or a student teacher with whom the teacher worked voluntarily, where the idea was conveyed person-to-person. The remaining sources were voluntary workshops, and outside agencies as remote sources participating in an imposition of the change involuntarily. The strategically planned innovations seemed largely (54%)to have originated with the teacher's own creativity or, in the case of adapting ideas from reading or observations, their own initiative. Discounting Loraine Tims' 13 initiatives, the self-planned category still accounts for 42 % of all classroom innovations. Only two of the teachers mentioned creating innovations designed to address emergent conditions after the teaching year began, but for one, Emma Goldman, it was an important kind of innovation. Colleagues accounted for only 11 %, and that seems to have been confined to the Washington School, where two pairs of teachers developed important paired relationships across the hall from each other in this impoverished setting. The chief source of innovative ideas outside the teacher's own initiative or creativity were outside workshops that teachers attended voluntarily. One workshop, on Shakespearian drama attended by Ellen Nolan of the Moray School, accounted for 3 of the 11 workshop innovations.

Educational Impact

Evaluating innovations involves complex issues of value and assessment technology. For each of the 61 innovations I made two kinds of assessment from the testimony: (1) an index of 2 if the innovation seemed positive and fundamental (e.g., affecting reading, numerosity, or basic

INSERT TABLE 4 ABOUT HERE

motivation to learn); 1 if it seemed positive but less than fundamental; zero if it seemed to have no effect; minus 1 if it seemed disruptive in the current year's teaching; and unknown (?) if I could not make an assessment from the testimony. Table 4 presents the results of this relatively gross evaluation. A somewhat more refined index was developed, more for use in the full study

**Table 4**

**Index of Innovation Effectiveness by School**

| | ? | -1 | 0 | +1 | +2 | Total |
|---|---|---|---|---|---|---|
| Moray | 0 | 0 | 1 | 10 | 3 | 14 |
| Martinez | 2 | 1 | 5 | 1 | 1 | 10 |
| Washington | 1 | 1 | 3 | 25 | 7 | 37 |
| Totals | 3 | 2 | 9 | 36 | 11 | 61 |
| Per cent | 5 | 3 | 15 | 59 | 18 | 100 |

for which this is the pilot than for these initial findings, in which the numerical indexes of Table 4 were multiplied by my judgement of the per cent of children in the classroom affected by the innovation, yielding a weighted score of effectiveness -- again, with no test of reliability, and these estimates are probably not very reliable. For example, if an estimated half of a teacher's students were affected by an innovation with an index of 1 (an innovation less than fundamental in its content or process), the resulting weighted score would be .5. These weighted scores are presented for each teacher within schools in Table 5. The gross pattern of relative

INSERT TABLE 5 ABOUT HERE

effectiveness in Table 4, where the Martinez School teachers are distinctly less effective than teachers in the other two schools, is borne out more clearly in the weighted scores and averages of Table 5. The four teachers with the highest average effectiveness -- in order, Frank Carroll and Ellen Nolan of Moray School and Christine Victor (CX) and Karen Moore (MK) at the Washington School, introduced small to moderate numbers of innovations, while Loraine Tims, who was prolific in numbers of them, produced a lower average effectiveness score. It would be expected, I think, that one could introduce only a relatively few innovations directed at fundamental levels of education, but many that were more peripheral. Nonetheless, Tims is an interesting prototype: With a modest average effectiveness of .78 her 16 innovations produce a total effectiveness score well beyond the others. It is total educational impact, after all, that one would be interested in examining for over-all educational improvement, not merely the average effectiveness of a teacher's innovations.

Effective Innovations

In a preliminary study like this one it is useful to take a close look at specimens that are prototypes of the phenomenon one is investigating. While I began this study focusing on the phenomenon of indigenous innovation, the findings offer a second phenomenon, or at least a second unit of analysis: the innovative teacher. Table 5 presents us with two ways to look at the innovativeness of teachers. One relates to the efficiency of innovative effectiveness, indexed

**Table 5**

**Weighted Effectiveness Scores/Averages**

**For Teachers by School**

| | N | Total Score | Average |
|---|---|---|---|
| **Moray** | | | |
| EG | 7 | 6 | .86 |
| EN | 4 | 5 | 1.25 |
| FC | 3 | 4 | 1.33 |
| **Total** | **14** | **15** | **1.07** |
| **Martinez** | | | |
| CS | 2 | 2 | 1.0 |
| ON | 3 | -1 | -.33 |
| NNY | 3 | 0 | 0 |
| DJ | 2 | .75 | .38 |
| **Total** | **10** | **1.75** | **.17** |
| **Washington** | | | |
| TT | 7 | 6 | .86 |
| LT | 16 | 12.5 | .78 |
| CX | 5 | 6 | 1.20 |
| MK | 9 | 10.5 | 1.17 |
| **Total** | **37** | **35** | **.95** |

by the average score in Table 5. The other way of looking at teacher innovativeness relates to the total amplitude of innovation impact, indexed by the total effectiveness score in Table 5, which is more a function of the sheer number of innovations. Of course, these scores and averages are of unknown reliability, but they reflect well the conceptual distinctions being made, distinctions that do not depend on the reliability of these particular data. Frank Carroll at the Moray School and Christine Victor (CX) at Washington appear to produce innovations at the highest levels of effectiveness, i.e., aimed at fundamental understandings of their subject matter and affecting high percentages of their students, but introduce "only" 3 and 5 innovations, respectively. Their average levels are 1.33 and 1.20, respectively, and total scores, of 4 and 6.

Loraine Tims at the Washington School, on the other hand, introduces 16 innovations only some of which are of the fundamental kind, with an average effectiveness score of .78 but with a total classroom effect of 12.5. (A good bit of that magnitude, of course, is due to the fact that Tims was starting from scratch at a new grade level, so most of what she was doing was new to her. That does not mean, however, that, having to start from scratch she does not also create some genuinely novel and effective innovations, ones not seen before in her district or, perhaps, on the face of the earth!) Karen Moore (MK), the special education teacher at Washington, is perhaps the purest prototype of all, her nine innovations averaging 1.17 in indexed effectiveness, yielding a total effectiveness impact in her teaching of 10.5. Now the question arises, what degree of comparability can be claimed for these indices across classrooms, grade levels, or schools? For example, Emma Goldman at Moray and Tina Thompson at Washington produced the same number of innovations (7) with the same total effectiveness score (6), yielding, of course, the same average weighted effectiveness (.86). In what sense were their respective innovative impacts the same or even comparable? I judged effectiveness within the context of the individual grade level: Given that teacher's general curricular content, did this innovation promote it or its evident purposes at a fundamental level or rather more peripherally, and what per cent of the classroom's students would be affected? The meaning of effectiveness is determined by the grade level and the subject matter.

Perhaps the best way to offer a closer look at prototypical specimens, therefore, is to sample the best innovations from the best innovators. I have selected narrative descriptions of one innovation from each teacher who reached either a double-digit total effectiveness index or an average effectiveness score greater than 1, i.e., five teachers: Ellen Nolan and Frank Carroll from Moray, and Christine Victor, Loraine Tims, and Karen Moore at Washington.

***Ellen Nolan, grade 10-12 English (Shakespeare) at the Moray School, Type: Instructional -- Dramatic Activities.***

**EN: Last summer I attended an NEH institute on Shakespeare, run by directors, actors, voice training people. And it was a month-long, very intense six-day-a-week, about fourteen hours a day. ... So when they were sending out the brochures they sent one to me. And it was fantastic.**

**So I teach a Shakespeare course every fall, various plays, and almost a hundred percent is discussion and intensive writing. And this year the balance changed. I used lots and lots of the exercises that we'd done in the summer, which had to do with how you know things, through your body or through your voice, not just through writing it down.**

**So for example, in the class where we study Hamlet and Twelfth Night, I would have the kids choose a character and just for two minutes walk around the room in that character, so they were attempting to look at the world and how they thought that character would see the world.**
**FFL: And respond to what's there, and so on, and talk.**
**EN: Yes. That didn't work as well as when they were being silent. Occasionally I had to bring statues into the game [living statues, made up by and with the students as props] , for example when Claudius was saying to Hamlet, you can't go back to work, you can't go back to school. And Claudius and Gertrude and Hamlet, who are in the statue -- there was a director, a "sculptor" [a student], who put the three characters in their version of that frozen moment.**
**FFL: Told them how to stand, how to look, what facial expressions, etc. Created a sculpture with the three kids.**
**EN: That's right. And after they did that, the director/sculptor was talking out loud while the class was watching, then would ask the kids in the sculpture, What do you know in that position, in relation to the others? And would you change the position at all?**

**The kinds of things the kids said were really insightful, and they were different from one another. For example, the Claudius character in one of the classes said he was the power of the king, the one who clearly has power over Hamlet and over Gertrude, in many ways, felt like an outsider. There's a connection between mother and son that he didn't feel. He was outside of it. Gertrude standing behind Claudius, in a kind of protection, but worried about her son, what she felt toward him.**

**So those are the kinds of insights that --**
**FFL: You never get from the printed page.**
**EN: That's right. In fact in a strange way, they couldn't have had those insights without the printed page.**

**...**
**FFL: ... Drawing on that summer event. And how is that different from before, what did you do before?**

**EN: Basically, we talked about the book... There's a particular kind of assignment that I have and am kind of proud of. This is for the younger kids, so it's not as clear-cut. A thing that I call quotation relation, where you find lines where a word or a concept's been repeated in very different specific literal meanings... This is Lord Capulet speaking, this is Romeo speaking, he's [Capulet is] speaking in terms of love, he's [Romeo is] speaking in terms of love. And I use this to lean toward writing assignments that are very hard, but I think are kind of microcosm of what imaginative reading's all about. So that was still the bulk of the class. But it [regular teaching] was my stuff, and it [new mode of teaching] really deepened and enriched my awareness of it.**
**FFL: So this was still the meat and potatoes, but you put in other things. So some of this you took out, necessarily.**
**EN: Actually, not as much as I was afraid of. I mean I knew, I was proud of what I had done, I was proud of the teaching I had done before the summer, and was worried about was it an either/or, do I have to do the one or the other. And in fact that turned out not to be true. Many of the things that I did took a few minutes at the beginning of class and deepened the discussion, didn't go in a different direction.**
**FFL: It turned right to the usual things.**
**EN: Yes, it led to the usual things. On the other hand, I was also willing to chuck it. I mean, I cancelled a test of this kind -- tests that I think are interesting and fun to take, for a kid who has any literary bent at all, it stretches and challenges -- I cancelled it for an exercise that I thought was more important. So I became more of a convert.**
**FFL: That's in your Shakespeare class. How many classes of this do you have?**
**EN: I have three Shakespeare classes.**
**FFL: I see, and you were doing this in all three.**
**EN: That's right. I also teach a sophomore class, and I tried it. I was doing the Odyssey there, but I tried some of it with them, and it absolutely didn't work. ... because of my lack of skill.**
**FFL: How so? How come you have skill in the Shakespeare and not in the Odyssey, I don't understand.**
**EN: Well, the difference in age was a big thing. And I'm now doing Romeo and Juliet with the sophomores, and with the experience of a whole quarter doing this thing with the Shakespeare kids, I'm adapting it to the sophomores a bit. And I think it's going to work.**

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***Frank Carroll, grade 11 and 12 Advanced Placement and regular U.S. History, Moray School, Type: Instructional*** **' -- <u>*History as Interpretation*</u>.**

**FFL: ... I'm starting by asking teachers, What did you do differently this year?**
**...**
**FC: ... One of the things I'm doing that I'm finding is working very well is that I've decided after teaching so many years is that one of the biggest things wrong with instruction in history is that, beyond just being textbook-centered, it's too much focused on poorly written, poorly thought-out material. And textbooks are, as you know, not very well written. There are very few of them that maintain a good narrative style. So with the interest that has always been my interest in historiography, helping kids**


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see that interpretation is there in every period that they study, and that they have to learn how to consider multiple possible realities at once.

I've started taking older textbooks, some from the late 19th and early 20th centuries, and copying their portrayal of a historical period or a historical event or some particular policy, giving it to the kids to read. And the older books and the older texts have a better narrative style. There was much more concern among historians of the previous generation to write in good narrative style. And then they have to write short research papers identifying what they feel are the major distortions in a particular interpretation.

For example, I gave them Lodge and Gardner's description of Native Americans in their 1905 edition of the textbook, a chapter entitled "Aboriginal Americans," in which they draw judgments like "Indians were more intelligent than Negroes but less intelligent than whites. Whites and blacks had greater stamina than Native Americans." And judgments like, "While many people wished to blame the white man for the travail of the Indians, history confirms that inferior cultures always lose out to superior cultures." While a lot of this is obvious to someone who has read a lot, it's not obvious to kids what's wrong with these sorts of interpretations. And so then they have to go out and do research and try to identify. It's a reading exercise number one; number two, it's an effort to try to determine what are the major arguments of another.

Narrative style tends to blur the arguments because their central portrayal of themselves is descriptive.

FFL: Like that's the way it is.

FC: Right, not analytical. And so the kids are really drawn right into it, and the thing that's just fascinating about it is they'll come back and they'll say "Well, this is really well written, but I have problems with . . . " and then they'll pick some obscure -- it just seems to be the way their mind works, though, minds kind of like a garbage can, just focused on the little pieces of information, and the big picture just seems always blurred, especially in young learners.

FFL: What class is this?

FC: This is in 11th and 12th grade Advanced Placement American history and in the regular classes in American history, too. And it's fascinating to watch them be so easily distracted; there'll be minor -- they'll say things like "Alexander Hamilton, an outstanding American,"... where they will skip right over a larger idea which has more to do with the total culture, like "From 1789 to 1830 there was an evident growth in national unity." This book was written in 1942, in the middle of the Second World War. A few kids picked up that there's a need to write a seamless history and saw in play tensions and conflicts and disagreements, but most kids will run right by that for the Hamilton distortion. They will pick a very specific thing to focus on, which makes it just entirely a great analytical activity for class.

FFL: Yeah, now this is new this year.

FC: Yeah, I'm doing this for the first time. I experimented a little bit with it last year, with one assignment; but now, in this year, this will be the third time I've used this approach. I used John Hicks's history written in the middle of the Second World War, and I used Nivens and Commager and I have quite a collection of older textbooks. I am planning to use some of Carl Becker's stuff from the thirties in the next assignment. I have an edition of <u>The Growth of the American Republic</u> that was published in 1937 right in the middle of the New Deal, before the Second

World War; really interesting to look at the portrayals of African-Americans in that.

FFL: ... What did you used to do?

FC: I used to just give them central interpretive questions. ... I would ask a question like, "Was Jacksonian democracy primarily constructive?" "Was World War One avoidable?" "Was the New Deal an appropriate response to the Great Depression?" The class divides, and half argue essentially yes, half argue essentially no. And each side writing short research papers.

What I'm doing now is I'm focusing more on narrative history and then trying to have them see how in each generation there's always a debate and a conflict having a lot to do with just what's going on in that time period that governs the way they tend to see history. And then when they see in the various decades, mostly in the 20th century -- because before the 20th century you're writing pretty much nationalistic history -- when they see how there are really competing views, you'd be surprised at how far it takes them into understanding there are multiple possibilities here, and reality to a very much extent is really in the eye of the beholder. And the time really has a lot to do with how we see.

FFL: And that idea of multiple interpretiveness, for lack of a better word, is grasped now in a way that they didn't before.

FC: Well, I think it brings it even better than the open questions I was giving. They picked it up the other way; but it comes even -- they're just shocked, many of them, especially among the brightest kids, really shocked at some of the . . . . And some have heard of the historical, like Henry Cabot Lodge, the kids had heard of Henry Cabot Lodge and knew he was a Senator as well as a historian, they find it fascinating that he wanted to write an American history textbook.

But yeah, it achieves a lot of what I want to achieve in a much better way than the push I was using before. I've always used debates and argumentative essays, a lot of writing, a lot of interpretation, heavy research. My kids heavily use Regenstein, always have. But this is really a different ball game, totally, and comes at it from a very, very different angle, and I think anyway it's a lot more successful because --

FFL: Successful in what regard?

FC: Well, I think the kids are picking up much quicker that this is really a floating crap game right here, this interpretation. They're just really shocked, many of them, at the outset, that there would be anyone grinding a political axe in the Colonial period. To them, that's so removed. Why would anyone care? Why would a Marxist historian bother to put his spin on the Colonial period? To them, this is just kind of a quaint thing to do, bizarre. They don't really realize how competitive interpretation is. And then they're sort of amazed at the effort that the historians with radically different views make in trying to prove their side of it.

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*Christine Victor, kindergarten teacher, Washington School, Type: Curricular -- Math Their Way*

CX: In the kindergarten it takes mainly the form of using the manipulatives. We start out by putting the MTW manipulatives out on the tables, and I don't tell them anything about them, and see what they do with them -- with the unifix cubes, see what they do with the pattern blocks..



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FL: Unifix cubes, the ones that fit inside each other?
CX: They fit inside each other, you can make patterns with them, whatever ... I put them out on the tables for the first several weeks and then I give them some instruction on what to do with them. And we do the calendar. There's a certain MTW calendar.
FL: The one on your board there?
CX: Yes. We use it all year long...
FL: And you have the number line; I see that. ...
CX: We count [the blocks], we make patterns -- that's basically what you do in kindergarten.
FL: Like.. give me a pattern, like..
CX: Red, green; red, green; red, green. We can make it more difficult: red, red, green; red, red, green. Maybe I'll make a pattern and they have to copy it. ...

And then I do a lot of graphing with them. Like we just finished graphing with fruit loops [cereal bits that come in varied colors].
FL: Graphing fruit loops.
CX: Right. Each child was given a designated amount of fruit loops. I measured [counted] out the same amount [number] for each child. first they get to sort them, so that's another kindergarten concept, sorting.
FL: Sorting according to..
CX: Color. And then I gave them each a graph that had the color name written on there and the fruit loop circle. They had to place their fruit loops, one on each circle. OK? then as they took one off to eat it, they colored the circles with that same color crayon. And then they had to count how many fruit loops they had of each color. And I wrote the number down, so each one of them had their own personal graph. And we talked about them, we compared them. Some had more red ones, and some had more orange ones. So we compared and we contrasted and we sorted and we counted and that took in a lot of activity. Just learning how to graph.
FL: And how did that compare with what you had done earlier? What did that do better for you?
CX: Well, it gave me some kind of a goal for math.
FL: UmHmm. You didn't have one before?
CX: No. Well, I shouldn't say that. Before MTW we had a math textbook.
FL: A textbook.
CX: Yes. When I first started. I had an all-day kindergarten and we had a math textbook and workbooks and that was our math program. But this is a more manipulative math program. And they think they're playing and they're learning. ...
CX: Have I modified it? Yeah, well, you see the book goes all the way from kindergarten through 3rd grade, so it's up to the teacher to decide where to make the cut-off point. I've kind of decided we'd concentrate on graphing, counting, sorting, and patterning. ... We just do that all year long, and we get more sophisticated and harder as the year wears on. ... And number recognition: we do a lot with the numbers. That's another thing. ... [MTW] shows you [a new way] to teach them what the numbers look like and how to write the numbers.

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*Loraine Tims, grade 1 Washington School: Type: Instructional -- <u>The Word Ring</u>.*

**LT: So every week I make vocab cards to introduce our words, and I bought each child a ring.**
**FFL: A ring?**
**LT: A slip ring. I'll show you [a large key ring, holding vocabulary cards punched in the corner].**
**FFL: Oh, I get it, yeah.**
**LT: I bought each child a slip ring.**
**FFL: And you laminated them.**
**LT: I laminate 'em each week... I laminate each word [one word to a card]. ...**
**FFL: You physically hook them together. Now is that your idea?**
**LT: Yes.**
**FFL: It was you. You got it out of your own head.**
**LT: Right.**
**FFL: Now where did you get this ring idea?**
**LT: The ring idea? I saw this at one of the classes I substituted in. It wasn't for her to give to each kids, the cards, but I saw the ring on something else, and thought, "I have to have something we could add to," something they could open up on their own, because they can open this up and add their own. Cause I just gave them, yesterday I gave them four new words. The "jump" and "in" and "out."**
**FFL: Now is this your printing?**
**LT: That's my printing.**
**FFL: They don't print up your words.**
**LT: No, that's right. ...**
**FFL: How many kids do you have in this class?**
**LT: 21.**
**FFL: You write 21 of these things?**
**LT: 21 for each word. Right. Yes.**
**FFL: And then you laminate the whole thing and then cut it up.**
**LT: No, you cut it up first, and then you laminate them.**
**FFL: And then you punch them.**
**LT: Right, I punch holes, and then I give each child...**
**FFL: Pass them out.**
**LT: Right.**
**FFL: So at some day you'll pass maybe, is five of these for the number of words in the sentence, for that day?**
**LT: Yes, there could be five. Right. This week, the last two weeks, the words are getting a little bit bigger now, and they're not going according to, you know, like with this book, it all related to something. Now, I have to, they're getting to a little higher level, and they're learning, and they're, this is what I'm doing now with the words is relating them to a sentence in their writing.**
**FFL: So you're no longer adding to this ring.**
**LT: Oh yes. Yesterday, they received four, "in", "out", "once", and "jump".**
**FFL: So "out" would be one here somewhere or...**
**LT: Yeah, I don't think he has them in his desk, I don't know if he attached them to his ring, but they're in his desk.**
**FFL: Now what are they, we've got this ring, with, maybe 30 cards. What do they do with this?**

LT: What do they do? Well, if they have to go back [refer "back" to words forgotten], I always still incorporate all these words. We use them all the time. I have on Monday, I usually make my own hidden couple, I mean I'm still always go back to "see", "blue", and "cat", and I'm still incorporating all of those, the words that we use, okay. See if I can find--I make this--hidden word, and see we go back to "with", and "fat", and "see", that was at the beginning, and they have to find it.
FFL: Okay. Here's this sheet, with a whole bunch of jumbled up things...
LT: Letters.
FFL: But hidden in here, going down or across or diagonal, are these twelve words. Can, go, to, she, there, talking,...
LT: And they're all words in here.
FFL: All words that are on their ring.
...
LT: I feel good that they are actually comprehending the vocab words, the sight words.
And the ones that I think are having a little bit of trouble are the one that don't take them home, and just leave them in the desk and have no help whatsoever at home.
FFL: Some kids take these things home?
LT: Oh, they're supposed to. You know what is neat about those, which I thought. Because it's a split ring, my students start wearing them on belt loops like men wear their keys, and they just thought that was, and with the low risk children...
FFL: You mean the high risk.
LT: Yeah, high risk, right. The at risk, students, they have nothing that's really theirs. You know, they have seven, eight kids at home, and they share a lot, and nothing's their own. And this was sort of their own. They hung it on their pants, they'd take them to lunch. I mean, I still have them, and this is a half a year, and they're still taken to lunch with them. They'll still pull them out of their desks and play with them.
FFL: It becomes a toy.
LT: Well, that's fine with me because it's a learning toy that stays with them.
FFL: Yeah, but you didn't intend it that way. You discovered it had the toys property.
LT: Well, I did let them, there were times we played concentration with them. And that's basically a game, you put the cards down, it's a memory game. You know what that is? Two students play together, and each one had ten of the same words, and they put them over, and they have to pick up two that match, and they play that, and they do that once in while...
FFL: In pairs they can do that.
LT: Right. ... Together we pick ten, whatever ten you want, and play the game concentration. They'll still do that during free time. They'll grab their cards and do that.

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***Karen Moore, grade 1 and 2 special education, Washington School, Type:***

***Relational' -- Cooking and Parent Involvement.***

MK: This is a first and second grade learning disabled or cross-categorical, special education class. I have nine children in the class this year, and I team teach with Mrs. H, who has at this point seven. ... We

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share science, social studies, we do cooking class together on Fridays... We saw that the children needed some assistance, for many of our children we're I guess you call them latchkey children. Their parents were not home, would not come home until nine o'clock at night. They were home alone with other children and weren't caring for themselves. Some were not eating, some were not washing themselves, so I started to think about what these children could do to take care of themselves... And then it evolved where Mrs. H and I decided we will try an exchange, I would take her kids, I would invite them in ... cooking soup, and we got into science, we talked about steam, we talked about differences, how things change, you know, when you mix mixtures and different concoctions. Oh we also gave awards at midterm, just about now, at the end of the quarter. We gave their cooking awards, which were wooden spoons tied with bows and their names, and if they had made so many kinds of things and participated well, we gave them their wooden spoon awards.

FFL: So that was new this year?

MK: Yes, that was new. ...

FFL: And the cooking thing, well, you started that last year?

MK: And developed more this year. ... more learning, and also parent involvement. We felt that maybe we could get parents involved. Now we have a very difficult time getting any parents to come, communication is difficult, most of our parents, I'd say 80%, even more 85%, do not have telephones. It was hard for us to contact them. So we ran a newsletter, that was new, and we invited the parents to come in on Fridays to participate. And we've had some success, not what I would like, we've had two or three parents each quarter come in and participate.

FFL: Each quarter do you mean regularly?

MK: Um, sporadically. We had a father come in who helped us make pie one day. He cut bananas with the children, told stories. We had a mother come in who was helping us make lemonade and cookies. And afterwards we'd see a video. But it was non-threatening, where we even let the parents, invited them to bring in their small siblings or babies, so we talked about the babies, gave the children an opportunity to introduce their families. Parents, they come once, and they don't come back. And we thought this would be a little bit easier, because an opportunity for them to come. I don't think it's that they don't want to, I think maybe it's that they don't have transportation, we do not have a bus, a small mini-bus or anything in the district to pick people up. So there's a problem.

FFL: And if some parents have a hard time getting home at nine o'clock, they aren't going to come here during the day to do it.

MK: We do have some families who have grandmothers at home who would like to come, they've expressed it frequently, and they've made an appointment, but they can't get a ride to school, but I feel it's a success because it gives the children an opportunity to talk about what's happening in school, the parents talk about food easily, they talk about recipes easily, and they will, many of our parents at times I've seen that have not the reading or writing skills to communicate but in this case they will talk to us about these things, about the program.

FFL: So, you said, combined first and second?

MK: It's six to eight year old, specialized.

FFL: And about how many of the kids' parents have come?

MK: Everyone has come.

FFL: At one time or another.

MK: Right. Everyone has come at one time or another. We've also tried to bring in the computers, I've had wonderful response by telephone when


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**I invited parents to come in anytime to try, to play on the computers, I've stated it in the newsletter that their child wishes to show them what they have learned on the computer. And then I had that very next day after the letter, on the phone, I had everybody calling, I was down in the office for forty minutes, they all wanted to know when they could come. Only two parents came.**
**FFL: How did they call, they don't have a telephone at home?**
**MK: They were at, there's a telephone on the streets in the projects, so I would have some people calling from the projects, early in the morning, or they would go to somebody's house to phone, so they were able to call in.**
**FFL: So a lot of calling response, but then not all those who called were able to come in.**
**MK: They couldn't come in, but we did have people, as I said, two families came in, and they sat, as soon as we knew they were coming we got the computer, and we put in a real simple program the children could work without the teachers being there, and gave the parent a chance to be with the child, and I think that's very important.**

Dimensions of the Qualities of Innovation

In addition to types of innovation, as grossly categorized above, some distinctive qualities appear in this sample that would seem to enhance (or limit) educative impact. I identify eight of these qualities in terms of polar opposites, derived from examining innovations from this sample alone. The list of these qualities will grow and be reorganized as the sample is expanded.

1. Interconnection of ideas, skills, or procedures across different conditions or contexts versus Isolation of skills, ideas, or procedures in one condition or context. E.g., TT's unit and whole language as high in interconnection; similarly, Emma G's whole language and green tray, and LT's use of student ID's across a wide range of conditions and contexts.

2. Life-related ("experience-near") content versus content that is alien or encountered in school only. Here I distinguish alien from novel: alien content has no basis in students' experience, whereas novel experiences which are not alien are connected by students to their on-going experience. E.g., MK's food preparation; EN's allowing student "directors" to position and interrogate other students as they become "sculpted" into statues reflecting a particular moment in the dialogue of a Shakespearian scene.

3. Increase [versus Decrease] of attention to, time on, or motivation for learning. E.g., LT's timer-start routine to open each day; ON and NNY's disruptive teaming, introducing much

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distraction, at least in the short run; FC's expansion of the student's task from arguing one side of an issue to detecting biases in varied historical treatments of the same topic.

4. Impulsive [versus deliberate, planned] movement into a new teaching mode or content, where the result is confusion and stumbling (versus control, organization, predictability). E.g., ON and NNY's unplanned movement into team teaching in the same room; as contrasted with TT's observation of the effects of hugging and the planned introduction of a hugging routine at the end of each day or even E.G.'s response to a particular class's tight clique structure and exclusion by the planned introduction of lottery seating two days a week.

5. The innovative move as one element in a family of innovations from a single source [versus a single, autonomous innovation from a source not shared by another innovation]. E.g. EN's many new instructional approaches in teaching Shakespeare, each sharing a common underlying quality and origin, or CX's many new moves from Math Their Way versus LT's word ring or TT's hugging routine.

6. Balanced [versus Unbalanced] division of labor to induce or sustain attentive learning or study. E.g., FC's shift to interpreting facts and narratives as putting more responsibility for arriving at an interpretation on the students, in contrast to his previous assignments of arguing one or the other side of an issue defined by the teacher; or LT's numbering system, which allowed students to share in the identification of property, monitoring line passing behavior, etc.

7. Absorption [versus localization] of the innovation in the on-going lives of the students. E.g., LT's word rings worn by the children home and incorporated into home and school games.

8. Expansion [versus Non-Expansion] of the niche which supports or entails learning. E.g., MI's and her co-teacher's involvement of parents in one school day a week around cooking, which could set the stage for further educational dialogue between parent and child in the home context of cooking; FC's requiring use of the university library; LT's word ring stimulating instructional interactions at home.



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## Conclusions and Discussion

"Conclusions" is too strong a word in the context of a pilot study like this unless we understand that any conclusions to be drawn are not about knowledge but about next steps in inquiry: working conclusions. In that light, I conclude that teachers' indigenous innovations do constitute a creditable source of educational innovation, worthy of research in its own right. Teachers in one privileged school and community, and one severely underprivileged school and community, gave highly specific evidence of innovations in their curricula, their teaching, and their governance, innovations in considerable numbers and degrees of positive aim and potential impact. At the very least the findings beg for further inquiry into this local dimension of educational innovation and improvement. No data were gathered, and no claim is made, related to students' resulting achievement, or even to such process variables as time on task. The data speak to the issue of potential educational change only, and via change, potential improvement. When one considers the number of teachers in a school system, however, not to mention the nation at large, an innovative activity anything like the kind and frequency sampled in these teachers would add up to much innovation indeed -- and possibly much more innovation, if support for it were consciously provided. Further, this indigenous source of innovation, so far as I can tell, has been totally ignored by researchers and school administrators.

Many are quick to conclude, and I was once among them, that because there are no monetary or other incentives for instructional or curricular change, little or no change is likely. These data, as positively biased as they may be, show either that teachers will innovate to improve their practice without such incentives or that the incentives are there but remain invisible to those without the right perceptual lenses to see. The incentives, I think, are there, built into the teaching task itself. Teaching everywhere is difficult. Teachers obtain their day-to-day satisfactions not from monetary rewards, but from clear evidence that they have mastered this difficult task, evidenced by their visible impact on children's learning, an observation made upon systematic data analysis by Lortie (Lortie, 1977; 103-106). The more impact on learning, the more reward. Right there is the incentive: if teachers believe they can have a new, more

satisfying impact on their students' learning by using a new approach or adding new content, they will do so. But the belief is not something they can be persuaded of by some outsider who knows nothing of the actual and local complexities of the teacher's own classroom. Belief about what will have an impact is not general, but specific to the teacher's "own" students within her or his own teaching situation -- own schedule, materials, skills, levels of energy, and a host of other local considerations, including the school principal's support. If the locally rooted belief in greater local impact from the New X arises in the teacher, so too may energy and readiness for trying the New X. And if there is no New X already made, but the teacher feels dissatisfied with the results of efforts in X domain, then energy and readiness may well be there to invent an X answer out of whole cloth -- or paper, wire, and paste. Like the innovation itself, the incentive is not external, but indigenous, rooted in the teacher's local teaching. If local, indigenous innovation does turn out to go on more generally, can we capitalize on it without destroying its local relevance and its local fit? Can we learn to support teachers' own efforts without introducing constraints against this voluntary innovation? Can we in McLaughlin's words "enable," without requiring or constraining or cajoling or persuading -- without, that is, turning voluntary, situated problem solving into mere compliance with authority's wishes or requirements?

What patterns or phenomena emerged that should be pursued in future research? One striking finding was Loraine Tims' prolific innovation. Do teachers new to a grade level and/or to a school innovate more than others by virtue of the new setting and demands? Is there something of a "fresh start" phenomenon, in which teachers who change grades to teach capitalize more than grade-stabilized teachers on the new ideas that are always being published in magazines or the new problems that always arise in such fresh starts? If so, voluntary changes in grades taught become a source of educational change. Another striking fact in these preliminary data is that teachers may obtain ideas from other teachers in congenial teaching pairings, like Tims' and Thompson's at Washington, but generally speaking, they obtain their innovative solutions on their own, by outright creation, by adoption/adaptation, or from

personally and voluntarily attended workshops. They appear, like Lortie's (1977) "Five Towns" teachers, not to get their ideas from the other teachers in their own buildings. As Lortie (1977, p. 195) says, "... no arrangement exists for sharing "profits"; each teacher works alone with his [sic] students and earns whatever psychic benefits he can." Nor did I detect even a hint of evidence that school administrators had any thoughts about arranging for teachers to talk with each other about what they had learned or were trying out, even when the administrators themselves had arranged financial support for workshop attendance. Future research should probe not only innovation origins but also the extent to which teachers communicate formally or informally about their innovations, and if so, how, with what effects and with what obstacles.

The case of Olive Norris and Nellie Young at the Martinez School is also suggestive. Here are two congenial women co-teaching under inauspicious circumstances. They do not have enough books to go around, so have to take the class time of 47 fifth graders to pass books from one half of the group to the other; they begin co-teaching by planning two or three days before the opening of school; and each simultaneously begins work on her master's degree, taking course work in the evenings and on the week-end. That their co-teaching, which both regarded as their most significant innovation, is judged to have zero favorable impact in the current year perhaps is not surprising under the circumstances. That judgment, too, might have to be modified on the basis of a re-visit in the springtime, looking back to the previous November when they were first interviewed. But it is clear, nonetheless, that even though Mrs. Perez, their principal, knew about and approved of their co-teaching, she gave no supervisory support in the form of advice or requirements that the two teachers plan for their co-teaching in advance; nor could she, in a school that size and in a school system that bureaucratized, be present to the two teachers on an on-going basis to assist in the transition.

In contrast, a different kind of co-teaching evolved at the Washington School: MK and her special education partner had their own self-contained classes across the hall from each other, and took turns reciprocally exchanging each other's class for particular subject lessons or activities. The co-teaching emerged in parts, directly out of on-going teaching. They never had

to wrestle with the complications of two classrooms worth of students in a single classroom. The Washington pairings never experienced the overload that Young and Norris did in their combining so many new approaches and activities simultaneously with so little preparation. Are there optimal and also deleterious levels or combinations of classroom innovations? Should research on indigenous innovation assess degrees and domains of "overload" as a routine part of its investigation? Should questions be asked, for example, about the teacher's teaching burdens, things that block doing what needs to be done, in order to assess forces counter to innovation which, if alleviated, could release energies for innovation?

These questions bring me to address needed improvements in this line of research directly and more generally. One problem that must be solved is the biased sampling that comes from recruiting teachers on the basis of their doing new things. Is there an interesting, legitimate inquiry to undertake with teachers that would obtain their informed testimony about their own classroom work that includes but does not highlight attention to teachers' recent changes in their teaching? Another problem that must be faced more directly is one brought on by the teacher's own construing of, or memory for, what "counts" as new. Several teachers omitted mention of new moves in governance until that domain was probed for, a probe that came late and only as a result an offhand mention. More systematic probing for the categories that have now emerged is now appropriate -- probing only after, of course, the more open-ended question, "What's new?" And the "what's new?" now seeks a wider context within which it can be embedded. Perhaps the question, "What's most important in your teaching?"

The whole question of effectiveness also begs improvement. Would it be profitable to have the teacher, after describing his or her practices, rate each one on a few scalar dimensions: e.g., from negative to positive impact on (a) attention, (b) learning, (c) finishing assigned work, (d) working with others cooperatively? Could teachers, too, give useful data for each innovation on the % of the class affected? (Some innovations are important, of course, which are directed toward one or a few children who have the most difficulty.) At some point, too, it will be useful to talk to some of the students about how they experience the teacher's innovations, or

some selection of them. Finally, the question will persist, what is the actual, randomly sampled, distribution of indigenous innovation at various grade levels, in various subject matters, and in various kinds of school? That is, what is the demography of indigenous innovation? I see no way out of my practice of traveling to the school and interviewing the teacher in his or her classroom, however, nor do I see much useful data coming from a method that does not see the school as a whole as a fundamental unit providing context for classroom innovation. The fact that the Washington School principal attends many teachers' workshops and circulates to his teachers, as a matter of his own values and conscious strategy, circulars about many more workshops than he attends is as important to know about Washington teachers as it is to know that the Martinez principle does not attend such workshops but does have the network connections and clout to get her school designated as a limited enrollment school, where changes in incoming enrollment occur at the kindergarten alone, nowhere else. Student turnover in some nearby schools, schools Martinez teachers earlier taught at, is so great that almost no continuity in lesson or learning can be attained. At the Martinez School classroom enrollment remains very stable both within and across years. It is only by being on the scene and being open to school-wide conditions and constraints that one can evaluate innovative possibilities and supports in a wider sense. A taped interview with the principal has also been useful, and appropriate contextual probes must be developed to make them even more informative. This would be but one part of investigating the ingredients of a niche for indigenous innovation and, more generally, the larger habitat of innovation, both supportive and threatening.

This pilot study has served its purpose: It has begun what looks like a new direction of research in school improvement by showing that teachers in local circumstances do, indeed, innovate in substantial and meaningful ways in their classrooms. It has begun to sort specimens of indigenous innovation into kinds and sources and rough degrees of effectiveness, and has identified some lines of improving the inquiry itself.

## References

Fullan, M. G., Bennett, B. & Rolheiser-Bennett, C. 1989. Linking classroom and school improvement. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Huberman, A. M., & Miles, M. B. 1984. Innovation Up Close. New York: Plenum Press.

Lortie, D. C. 1977. Schoolteacher. Chicago: University of Chicago Press.

Louis, K. S. & Miles, M. B. 1990. Improving the Urban High School. New York: Teachers College Press.

McLaughlin, M. W. 1990. The Rand change agent study revisited: Macro perspectives and micro realities. Educational Researcher. 19, 11-16.

## Notes

1. At the time of writing no test of the reliability of my categories or other assessments has been made.

2. A comment is in order about Tims' unusual innovativeness. Tims had substitute taught the previous year in a great variety of settings. Two years before that she had taught eighth grade in a junior high school almost as impoverished as Washington. Teaching first grade in this, her fourth year of teaching, was a new experience for her. Further, she had been notified of her teaching appointment at Washington just three days prior to the opening of school. She found the previous teacher's materials and plans either missing or not useful. In addition, since the school district itself was in transition in its curricular planning, no curricular guide had been developed for the first grade. Finally, Washington's principal was committed to school improvement via teachers' voluntary attendance at workshops, some of which he could pay for. He did not consider it his role (or perhaps his expertise) to instruct Tims in matters curricular or instructional. According to these teachers, he complimented them on practices he saw engaging students' activity and basic skill learning. It was not his practice to require any teacher's attendance at any workshop. Instead, he himself attended between 4 and 7 curricular and instructional workshops each year, and regularly placed brochures about workshops in his teachers' mailboxes. Next door to Tims, Tina Thompson was entering her first year at Washington and her second year in the district. When Tims appeared at her classroom, therefore, she was confronted with a vacuum. She was on her own *immediately*: few

materials, no guides, compliments for her own efforts and encouragement but no definite supervision, and a colleague at the same grade level who was new to the school and had taught first grade only two years. To all of this, I must surely add that Loraine Tims, far from being overwhelmed by the vacuum, responded to it with great energy and no small amount of personal creativity. But there may be a lesson worth pursuing in the conditions leading to Tims' unusual profile of innovation.

3. This was a shift in the <u>way</u> Frank Carroll taught history, so is classed as instructional. But it clearly entailed shifts in the actual <u>contents</u> of texts read by the students. All instructional shifts entail shifts in curriculum and vice versa, yet the distinction remains useful and widespread.

4. Again, the ideas and perceptions which these new parent-child activities brought into the classroom constituted a curricular change; but the primary emphasis of the teachers in making this shift was to change the relationships among the parents, their children, the teacher, and schooling to create a wider <u>niche</u> to support schooling.